

XXVII.—*Description of Coccochloris Brebissonii, a new species of the Palmelleæ, in conjugation.* By G. H. K. THWAITES.

[With a Plate.]

*Coccochloris Brebissonii*, n. sp. Frons saturate-viridis, gelatinosa, vix cartilaginea, effusa, nec frustulosa: cellulis subsphæricis vel rotundato-ellipticis, minutissime granulosis: sporangiis oblongis.

*C. Brebissonii* occurs upon the perpendicular surfaces of wet rocks, forming a gelatinous or slightly cartilaginous coating, separating very readily from the surface of the rock. It is of a pale green colour, sometimes slightly reddish. The cells are shortly elliptical with the ends much-rounded, and contain a minutely granulose endochrome of a yellowish green colour. The gelatinous appendages of the cells cohere to form an apparently homogeneous mass, and are not separately distinguishable as in some species of the genus. The cells when conjugating are at first united by a narrow connecting tube, but this soon enlarges to the width of the cells. The sporangium is of an oblong form and transparent, containing an endochrome somewhat similar to that of the cells, but with the granules much larger. Immediately that conjugation of two cells has commenced to take place, their granules of endochrome are observed to have increased in size, and this increase continues until the sporangium is mature. During the formation of the sporangium, the original cell-membranes appear to become absorbed, and are not thrown off as in *Cylindrocystis Brebissonii*.

Branched threads similar to those represented in my figure of *Palmella botryoides*, Grev.\*, ramify throughout the gelatinous mass of the present species, but only in one instance have I succeeded in tracing a connexion between them and the cells, owing I suspect to the state of maturity of the plant. By watching the species attentively, I hope to be able to observe the early development of the plant from the contents of the sporangia.

This well-marked species, which is I believe undescribed, I have the greatest pleasure in dedicating to the learned French botanist M. de Brébisson, to whose researches we are indebted for the first discovery of species of *Palmelleæ* in a state of conjugation.

#### EXPLANATION OF PLATE VIII. C.

Fig. 1. Small portion of *Coccochloris Brebissonii*, showing the cells and ramifying threads.

— 2. Cells of *C. Brebissonii* in conjugation.

— 3. *Mature sporangia.* All magnified 270 linear.

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